

THE ART OF WORKING

by

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With a Foreword by

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FOREWORD

India is beset with a number of vital problems, some of them baffling to a degree, but among all these, there is none so vital or so baffling as that of increase in production all round, for without it there is no hope for the country. Population has been growing steadily for years and unless production overtakes the lag of the past and keeps pace with the growth of population in future; there will be nothing but "waot" staring the country in the face and further lowering an already low standard of life with all its serious consequences.

Increase in the outturn of work of each individual is, therefore, the problem of the hour and will remain so till it is satisfactorily solved. Any contribution, however small to the solution of this problem is, therefore, a patriotic act. Judged from this angle, Shri R. B. Lal's pamphlet on "The Art of Working" is a timely move in the right direction. The very fact that in spite of his exacting duties on Railways he could find time to collect his ideas and write all that he has done is evidence enough, if it was ever needed, that he has himself acquired the right method of

work and has made good use of his time. He has now set the example and it is for others to practise what he has preached.

I have no doubt that if he succeeds in persuading even a few readers to work to the views, so lucidly enunciated in the pamphlet, he would have rendered good service to the country. In any case, if he fails, the fault will not be his, for Shri Lal has hardly left anything unsaid to impress upon the readers the importance of work and the need for creating in the worker active interest in his work. It cannot be denied that this is after all the crux of the problem, for unless the worker begins to feel an interest and pride in what he has to do, his work would remain a drudgery and cannot be kept up for any length of time. It will have to be acknowledged that interest must first be created before efficiency can be achieved and that success can come only from efficiency. There is, however, one aspect of work which is also of great importance for achieving efficiency. There must always be a method in work for methodical work lightens the burden, ensures increased outturn of the right type leading eventually to outstanding success.

In case of work other than manual, particularly that which involves handling of men and their affairs, tact, patience and a capacity for understanding the points of view of others concerned are useful assets. Without these, even hard work frequently leads to avoidable frustration and failure. "Do unto others as you would like to be done by them" is a good motto in life for all, high or low. A person who controls a large number of men must always take into consideration the reactions of his orders, policy and behaviour on those who are affected by them. A commander can seldom succeed without acquiring the confidence and devotion of those under him. The same is true of a person in a position of trust and responsibility.

A pamphlet like the one prepared by Shri R B Lal can be of great help to workers in all walks of life and will, I hope, be read with the care and the attention it deserves.

L. P. Misra

CHAPTER 1

THE BLESSING OF WORK

Work is the fundamental law of creation. Without work life could not exist, but even if life were possible, there would be nothing to live for. Hard work is a necessity for the development of body, mind and character to their full stature. But work, which is congenial, is an exquisite pleasure ; it is Nature's most wonderful tonic for invigorating the faculties of body and mind and preserving their suppleness. But for the blessing of work, the human machine would go to pieces. We see many examples of this in the case of retired people, who, deprived of regular work, find a void in their lives with nothing to fill it ; so their lives shrink and their health and vigour rapidly decline. It is good, honest and regular work that preserves the physical and mental balance. Unless carried to the extreme point of exhaustion, hard work makes for good health and longevity. Well has it been said in the Upanishads that 'in the midst of activity alone wilt thou desire to live a hundred years.'

If we look to the examples of our great men, we find that, as a rule, their lives were characterised by intense and varied activity.

An idle mind is the devil's workshop, and unless a man has plenty of work to do, he would be besieged with worries, fears, evil thoughts and enervating feelings of all kinds. Conversely, one of the best ways of driving away such negative feelings is to fill the vacant hours with pleasant work.

It is better to wear out than to rust out. Idleness is more exhausting, in the long run, than hard work, and but for work life would be an intolerable burden. Any one who does not make his due contribution to the work of the world is a mere parasite. Man can only get out of life what he puts into it. He cannot get something for nothing, and should he attempt to accept what he has not earned, he is likely to lose even that which he has got; namely, his character and his native abilities. The industrious alone can experience the glory of achievement, while the slothful are continually tormented by the spectres of greed, envy, malice and regrets. Only through work does life reach its fulfilment. Work is one of the keys to happiness as well as goodness in life.

CHAPTER 2

LOVE YOUR WORK

Since work is the supreme blessing of mankind, the only sane attitude towards it is to look upon it as such. Therefore, whatever the nature of work, the first principle of efficiency in doing it is to love it, to take an interest in it, to feel delight in doing it. An absorbing interest in your work is the primary condition of efficiency and success. It focalises all your scattered faculties on your work. It takes the drudgery and monotony out of work, and in course of time even transforms dull work into a pleasure. Without interest, work becomes boring and there is a rapid tendency to fatigue, with a consequent deterioration in the quality of workmanship.

Science has pressed machinery, steam and electricity to the service of man and replaced manual labour, in many spheres, with mechanical power. Still man has to do a great deal of work which is dull and disagreeable, or humble and laborious, and any one who is required to do such work, must learn to throw his whole heart and soul into

it He must love his work and take pride in it, if only as a stepping-stone to a better and more congenial occupation. Just as in a car every screw serves a useful purpose, so everyone who does his allotted share of work efficiently, no matter how humble it is, makes a valuable contribution to the well-being of society, and even the lowliest of worker, if he bears this in mind, would find an interest in his work.

A man's work represents at least fifty per cent of his life To have an attitude of hatred or hostility, or even indifference, towards one's work, therefore, means conflict and waste of nervous energy in this half of life.

"Love of your work", says Dr. O. S. Marden, "will enlarge your life and increase your ability. Joy in one's tasks is what sunshine is to the fruit and flowers A person can do much more and better work where his heart is than where it is not."

If your job is hard, you should love it all the more, for the tougher the job, the greater the thrill in doing it and the greater the opportunity it offers you for achievement and for self-development.

Quite a few people look upon their work as a sort of punishment. Every morning they approach it with a heavy heart, as it were, under compulsion. No doubt some jobs are disagreeable, and are made even more so by the manner in which they are directed by people ignorant of the fundamentals of human psychology. Nevertheless, it would be wrong to regard them as a punishment. An attitude of hatred towards one's work does a great deal of harm to anyone who has it. When a man works in a grudging, unwilling spirit, he discourages and weakens the very qualities that are essential to lift him out of an uncongenial position into a better one. For, a man who dislikes his work, is sure to do it half-heartedly and, therefore, more or less badly, and this will effectively prevent him from advancement and keep him glued down firmly to the very job he hates. Therefore, no matter how dull and distasteful a job may be, the path of wisdom is to make the best of it, to throw one's whole soul into it. Resolve that you will like your work as long as you are obliged to do it, and that very mental attitude will promote your efficiency and help you in making a success of your present job and in securing a better one.

Interesting and uninteresting are relative terms. To a large extent the quality of interest does not reside in the external object, but in the mind of the person who deals with it. Work that appears to one man as dull may appear to another, according to his point of view, as very interesting. "There is nothing good or bad, but thinking makes it so". Even so, interest is not a fixed property of the mind, but is largely subject to the control of the will and adjustable to a remarkable degree. Though some interests are inborn, many are acquired, and most of our dominating interests in life belong to the latter category. The tastes for polo, bridge or reading are all acquired interests, and many of us could recall examples of men who at one time hated Mathematics, or History, or Sanskrit but later on attained a remarkable proficiency in those subjects. The lucky few may get work after their heart, but the man of pluck soon develops a liking for his work and thereby extracts his full measure of success and happiness out of it.

Thus it is quite possible to create interest where none exists, and psychologists have recommended three practical ways for doing this.

In the first place, focus your attention on the

good points in your work ; look at its advantages ; see how it is valuable and important to your own well-being as well as to that of the community in which you live. Visualise the advantages that will accrue to you if you get interested in your work and do it creditably. Optimism, the habit of looking at the bright, useful or positive side of things, is an ally of effort and achievement. So be an optimist, try to cultivate a good opinion about the value and usefulness of your job.

Secondly, even if you have no genuine interest in your work, an attitude of assumed interestedness will soon generate true interest. William James, the noted American Psychologist, said, "Action seems to follow feeling but really action and feeling go together ; and by regulating the action, which is more under the direct control of the will, we can indirectly regulate the feeling which is not. Thus the sovereign voluntary path to cheerfulness, if your cheerfulness be lost, is to sit up cheerfully and to act and speak as if cheerfulness were already there." Act as if you are already interested in your work ; feel as if you are getting keen pleasure in doing it, and you will be surprised to find, perhaps sooner than you expect, that pretended interest is being transformed

into genuine interest, that the resistance you once experienced in attending to your work has broken down and has in fact given place to an attraction.

Thirdly, it should be remembered that topics which are at first unattractive, or even repulsive, gradually become increasingly interesting in proportion as knowledge or efficiency increases. If love of a subject facilitates effort and aids the acquisition of knowledge or skill, the latter again aids the former. Interest and efficiency stimulate each other, and by this reciprocal action, they both grow in a geometrical progression. The more interest a man takes in his work, the more proficient is he likely to become in doing it, and conversely, as a man becomes more and more skilful in his work, his fondness for it correspondingly increases. Thus perseverance in the earlier stages transforms many a disagreeable task into a pleasure. It is said that there is no object so ugly in nature that intense light focussed on it will not make it beautiful and attractive. The more you concentrate your mind on your work and the greater the mastery you acquire over it, the more joy will you find in it.

Psychologists affirm that interest is the biggest aid to concentration, memory and imagination.

It is also the best way of mobilising the vast hidden resources of the subconscious mind. But what is interest? Nothing but love of a topic, branch of study or work. If you love your work, if you take a keen interest in it, your mind will concentrate on it naturally and without much effort. The concentration, created and sustained by love, will mean that all the powers of your mind will be brought to bear in a unified form, upon your work and will illumine it as nothing else could, and bring to light details and aspects of it which would have otherwise remained unnoticed. Intense love of a subject is the secret not only of memory, but also of originality. Psychology has not yet been able to discover all the conditions which are necessary and sufficient for the creation of new ideas, but this much is definitely known that deep interest stimulates originality, for it enables a man to keep his problem revolving in his head whereby it is soon driven into his subconscious mind, which takes it up and keeps working on it, until one day, perhaps all of a sudden, a new idea, the much-wanted solution, is produced and pushed into the working or conscious mind like a flash. Therefore, to the brain worker, who is desirous of

acquiring mastery over his job, who wishes to devise simpler or better methods of doing it, to introduce time-and labour-saving devices, or to show originality in his work, the advice is . love your work passionately, take deep interest in it, give it plenty of time and thought. Love, in the form commonly known as interest, is undoubtedly one of the biggest aids to mental efficiency.

The advice to love your work should not be interpreted in too narrow a sense. For, if you wish to love your work, you cannot hate your fellow workers, or your boss, or your assistants, or your subordinates, or the environment or place of your work. You have to love all these, or at least have harmonious relations with them, if you are to derive full pleasure from your work. To cultivate the habit of liking and enjoying what you have is one of the secrets of efficiency in work, as it is of happiness in life. Those who keep constantly complaining about the climate or lack of amenities of their station, the stupidity or laziness of their subordinates, the peevishness of their boss, or the unhelpfulness of their colleagues, are violating one of the basic principles of efficiency.

CHAPTER 3

THE LOVE OF EXCELLENCE

The second great principle of efficiency, which is also applicable to all kinds of work, is the love of excellence. What is worth doing is worth doing well, is a very old saying, and one of the great master-habits, which you should cultivate, is that of doing everything with a deliberate intent to do it as well as possible, of putting your whole mind to it, and sparing no pains to make it perfect. Everything that comes out of your hands is a piece of your merchandise, let it bear the impress of your personality and be a guarantee that it is a first-rate work done to a complete finish and just as well as you can do it within the allotted time.

Many people feel that they are not being paid enough for the work they are doing, and so they are not prepared to work harder or better until they are promoted. This is like putting the cart before the horse. For promotion is for those who prove themselves too big for their jobs, and not for those who are too small for, or barely equal to, their present jobs. Small pay is no

excuse for doing half-finished or slovenly work. The habit of taking pains to produce as perfect work as possible is the best preparation for higher positions, and the reputation of being painstaking and thorough, of being absolutely reliable, of being an excellent workman, is the best recommendation a man can get for his advancement. Good work does its own talking and is the best advertisement of a man's worth.

There is always plenty of room near the top of the ladder, and in every undertaking employers are looking out for promising young men and women whom they can promote to the more responsible positions; for workers who show enthusiasm for their work and a keenness to take on extra work, if necessary, who do things without being told, who are not only thorough and reliable but also put a touch of originality on their work. Anyone who expresses these qualities in his work, who continually tries to learn

as an essential element in character-building. The latent powers of brain and character are actualised only when pressed to service in the accomplishment of a chosen task. On the contrary, when a man does poor work, he not only cheats his employer, but also himself. Half-done, slipshod work does not harm the employer half as much as it harms the worker. To the employer it may be a loss of a few rupees, but to the worker it is a loss of character and self-respect, loss of manhood or womanhood. Nothing will demoralise character more than the habit of shirking work, of doing it in a superficial and casual way or of passing out half-finished work.

Even dull work, if done well, becomes a source of joy, and one of the secrets of happiness in life is to acquire superiority in your daily work.

“Neither wealth nor position”, says a writer, “can give the glow of satisfaction, the electric thrill and uplift which comes from a superbly done job. There is a fitness in doing a thing superlatively well, because we seem to be made for expressing excellence. It is a perpetual tonic, which improves the health, the efficiency. There is no happiness like that which comes from doing our level best every day, always, everywhere, no satisfaction like that which comes

from stamping superiority, putting the royal trade mark of excellence upon everything which goes through our hands ”

There is a popular belief that excellence in working would come automatically as a result of seniority and experience. That practice makes perfect is now an exploded belief, as it has been definitely established by psychological experiments that a keen and active desire to improve, and not mere repetition, is the real cause of progress. Unless there is a strong will to learn, unless all experience is intelligently thought over, analysed, and profited by, practice, instead of making for perfection, will only fix the faults and errors more firmly. Anyone who aspires to excellence must master the knowledge and technique pertaining to his particular job, also, by conscious and determined effort he must cultivate the habits of accuracy, thoroughness and reliability, he must take pains to check, revise and polish his work until it acquires as perfect a finish as time permits.

Psychologists say that the average person barely uses ten per cent of his abilities, imagine the gain in efficiency, happiness, character and self-respect if every worker puts in a little more of brains and industry into his work.

CHAPTER 4

THE DEFINITION OF EFFICIENCY

Before a worker can be called efficient, he must fulfil the following conditions :—

(1) His work must be of good quality, i. e., neat and clean, accurate and free from mistakes.

(2) He must do the work at a good speed. He must do a ten-minute job in ten minutes and not in fifty. In other words, he must have a large output of work per unit of time.

(3) He must use the minimum of effort in doing the work, so that while working he feels little or no fatigue, in other words he must be able to work for long periods without feeling tired.

(4) He must show originality in his work. He must not merely carry on the routine, but must be able to initiate new schemes, make improvements in the machinery or system of working, and introduce time-labour- and money-saving devices.

Here it is well to recognise three distinct grades of efficiency.

In the lowest grade, the performance is slow, awkward and laborious, like a beginner's attempts

to learn. Such efficiency, or inefficiency, is quite understandable in a child, but unfortunately there are a great many grown-ups who never rise above this level. They are naturally failures in life because they do not take the trouble to learn their job to the point of efficiency but stop short of the minimum required of them. It should be realised that the practice of any art or craft or other kind of work becomes useful only after a man has attained a certain minimum degree of efficiency. Learning should be continued at least up to this point where real proficiency begins. The earlier stages of learning are no doubt necessary and useful as a preparation but they represent very low standards of efficiency and are totally inadequate for the actual execution of any work.

Above this lowest grade of efficiency there is the wide range of average efficiency which enables a man to get through his work fairly satisfactorily. Average efficiency is sufficient to deal with normal circumstances and to carry on the routine. The vast majority of people are content to acquire just this average or ordinary degree of efficiency ; they get just a little education, just enough for their bare requirements, and use only

as much brains as they must. No wonder they attain only a limited measure of success in their work.

If a man aspires to cross the limits of mediocrity and to attain the higher ranks of ability, he must continue to learn his job far beyond the point of minimum efficiency. In every engine or locomotive there is a reserve power over and above the horse power required for ordinary use. So the man of superior efficiency is one who has carried his preparation, his training, his study and thinking far beyond his normal requirements, who has stored up a great deal of surplus power which is of little use for his immediate needs but comes instantly into play should occasion demand it. He has made himself much bigger than his present job. For his daily tasks he uses only a fraction of his ability, but he himself and those around him are conscious of the subtle reserve power which he might bring into operation if faced with a difficult or unexpected situation.

There are two distinguishing characteristics of a man of superior efficiency. On one hand his daily work shows touches of originality, new solutions of old problems, flights of imagination, better and simpler methods of work, and ability to produce

two blades of grass where only one used to grow before, on the other hand, his great reserves of mental and physical powers enable him to meet successfully any sudden emergency or crisis to which a man of lower ability would easily succumb. Emergencies are the true tests of superior efficiency, and the more efficient workers are seen at their best in handling difficult situations, in answering unexpected questions and in solving problems that are not in the text-books. All this ability is the result of years of learning and preparation, which include a mental rehearsal of what he would do in the various kinds of exigencies that he is likely to encounter in the pursuit of his particular business or profession.

CHAPTER 5

SPEED VERSUS ACCURACY

There is a popular belief that speed and accuracy, quality and quantity of output, are mutually contradictory. Exhaustive experiments conducted by modern psychologists show that this is true only in the lowest stages of efficiency when quality and speed exclude each other; but as efficiency increases both the rate of working and the quality of output improve at the same time and in the really efficient man speed and accuracy generally go hand in hand along with the capacity to resist fatigue. The fast reader, as a rule, understands more and remembers better. The fast typist generally produces cleaner work, makes fewer mistakes, and is less tired at the end of the day than a slow typist. The same thing is, within wide limits true of all kinds of work. Quality should not, of course, be sacrificed to quantity, but the more efficient a man, the greater the degree to which he combines both, and modern psychology says that this is quite feasible and should, in fact, be the aim of everyone desirous of increasing his personal efficiency.

This point may be elucidated further. A comparison of the performances of slow and fast workers shows that quick working depends on the elimination of unnecessary movements or the fusion of two or more movements into a smaller number of movements, in the field of mental work it means thinking in straight lines instead of in circles or in zig-zag lines. But the important thing to remember is that as a man learns to work faster, the character of his performance changes. In other words, the performances of slow and fast workers, which represent different grades of efficiency, are essentially different in kind and not merely in degree. Thus a fast reader does not read each word in less time, rather, at each glance he takes in bigger lumps of words. Similarly, a fast typist does not take less time to type each single letter, rather in each stroke he takes in and types out a larger number of words.

Psychological research has led to the definite conclusion that there are great possibilities of increasing the rate of working without sacrificing the quality or accuracy of output. Let us now turn to the steps which should be taken to attain higher speeds.

Obviously, before anyone can expect to incre-

ase either quality or speed he must have a good grounding in the principles and practice of his particular job. A lawyer must know law before attempting to give legal advice hurriedly ; and a stenographer must have a good knowledge of the language, its vocabulary, spelling, grammar and idiom; as well as the special technique of shorthand and typewriting, before he can think of iincreasing his speed above the level of mediocrity. This knowledge may be acquired from books, *from old records, from conversation, from personal experience.*

It is equally important, as a prerequisite for improving speed, that one must be fully convinced that speed and accuracy are not mutually exclusive but that by suitable steps both may be cultivated together. The idea seems so paradoxical that without this definite conviction, one's efforts to increase the speed are likely to be half-hearted and due to lack of confidence quality is likely to suffer in the attempt to work faster. Having fulfilled this basic condition of progress, one must work with a conscious effort to increase the speed. One must desire and strive to do one's work faster and faster—whether it be typing, receiving messages on the telegraph, setting types in a press,

doing office work, or writing books. It has been proved by experiments that a keen and active desire to improve is the secret of progress.

As a further aid for increasing speed, competition, specially self-competition, is recommended, and for this purpose one should occasionally time one's output of work to see what progress one is actually making. Knowledge of the results of one's own performance has been found to be helpful in increasing the rate of progress.

It has already been stated that an increase in the rate of working implies the elimination of unnecessary movements, or the integration of two or more movements into fewer movements or the replacement of complicated movements by simpler ones. Therefore, anyone who wishes to increase his speed or, what comes to the same thing, his output of work in a given time, must look out for time- and labour-saving devices, for short-cuts in working based on knowledge and experience. He must introduce order and system in his business so that while no item of work is neglected, there is no duplication of effort. He must classify his work into types, and must learn what essentials are to be specially looked for or attended to in dealing with each particular type.

He must learn the art of extracting the essence out of a file, document or mass of papers, without having to wade through every word.

CHAPTER 6

FATIGUE

The ability to resist fatigue and thus work for longer periods at a stretch is an important ingredient in efficiency. It means that work is done with a minimum of effort or, what is the same thing, the maximum output is obtained from a given expenditure of energy.

Psychologists have made extensive researches into the causes of fatigue and the possible remedies. They have found that physical fatigue is a real thing which arises from an accumulation of poisons in the system, as a result of which the capacity for work decreases and there is an increasing desire to stop the work. Within wide limits, physical fatigue does not hinder good health or longevity, on the contrary it enables one to enjoy one's life, while the night-rest at the end of each day is usually sufficient to restore the run-down energy.

In regard to mental fatigue, scientists have come to the amazing conclusion that there is hardly any such thing as purely mental fatigue, that it is

much slower in coming, that in fact, the mind does not show any appreciable deterioration of its powers even when used over prolonged periods. For example, if blood taken from the veins of a manual worker at work is examined, it is found to be full of fatigue toxins as well as the waste products of exertion. But the blood taken from the brain of one engaged in brain work shows no such substances at the end of the day. Again, many experiments made with mental arithmetic have shown that a task of this kind can be continued for four hours at a stretch without any perceptible drop in efficiency. Similarly, one classical experiment made with a very unusual person, who could multiply four digit numbers mentally, showed that she could carry on this monotonous task, in spite of its demanding an extraordinary degree of concentration, for twelve hours a day and for many days together. At the end of the work there was a little falling off in the rate of working, but this only indicates, when allowance is made for the highly exacting nature of the task, that mental fatigue is, for all practical purposes, of no importance.

Another remarkable discovery is that even in physical work a feeling of inability to go on work-

ing is not very closely related to genuine inability. In other words, a feeling of fatigue is not a true indication of actual fatigue, and does not necessarily mean a lowering of efficiency. Even when a man feels dead tired and unable to carry on the work any longer, if he still pushes on, he may find, to his surprise, that actually there is no noticeable drop in either the speed or the accuracy of his performance. Experiments were made upon clerks writing cheques in an accounts office, and it was found that their outturn does not decrease appreciably even during the last working hour. Other kinds of work, such as carrying bricks and folding handkerchiefs for long periods at a stretch, show the same misleading feeling of weariness, which has no relation to the reality.

When a man is on a job for some time, a feeling of fatigue begins to creep on him, and the longer he continues with the work the more tired he is likely to feel. Yet this feeling of fatigue, or disinclination to carry on the work, is really no true index of how much work he can still do. As a rule, there is a considerable time lag between a feeling of fatigue and actual fatigue. Generally a man is not as fatigued as he imagines himself to be. Usually, one slackens off as soon as one begins

to feel tired, but one can still do as much work as one did formerly, if one only persevered.

Therefore, we have to recognise the strange fact that in spite of continuous work for long periods and in spite of a feeling of fatigue creeping on, the brain retains its freshness and suppleness. But is this much to be wondered at, when it is remembered that the human heart can continue working efficiently and without a break for sixty years or more?

The question arises that if the mind does not tire out or lose its efficiency after a full day's hard and continuous work, then what is the cause of the feeling of fatigue with which we are all familiar and which is an undeniable fact; and is there anything we can do to retard or prevent the approach of this feeling of weariness?

Paradoxical though it may seem, the truth is that the fatigue which most brain workers experience is not mental in its origin but arises from physical and particularly from emotional causes.

Mental work generally entails the use of certain organs, limbs or muscles, for example, our eyes, hands and backs—which may all get tired and may make us feel like stopping long before

the brain is taxed to its full capacity. Other factors which may cause physical fatigue are an uneasy posture, insufficient or improper illumination, over-strained eyes, poor ventilation, noise, excessive heat or dampness.

Posture is very important in work. Scientists who have made a study of this subject are of the opinion that man was actually designed by Nature, as a feat of engineering, to go about horizontally. Animals walk in a vertical position occasionally, but man sticks to this position under all circumstances. The habitual use of the upright posture entails a fight against gravity and means a continual strain. Though it cannot be altogether eliminated, steps should be taken to reduce it to the minimum by adopting more restful postures. As far as practicable, arrangements should be made so that work can be done sitting as well as standing. Changing from one position to the other is often restful, for continuous sitting appears to be as undesirable as continuous standing. Further, special care should be taken to see that the habitual posture in which one works entails as little constraint as possible of neck, back, shoulders and other parts of the body. By experiments everyone should find out the most easy and comfortable posture for doing his work.

So far as illumination is concerned, the light coming from small bulbs scattered around the room is better than that from a single large bulb. The former makes the lighting more uniform, avoids dark shadows and eliminates glare considerably. In order to reduce glare further, the bulbs should be so arranged, as far as possible, that they cannot be seen. A careful selection of shades will help in this. As regards the intensity of light, exhaustive experiments conducted by scientists have shown that nervous muscular tension decreases substantially as the intensity of lighting is increased from one to 100 foot-candles. Intensities higher than 100 foot-candles were not experimented upon because they are never adopted in actual practice in artificial lighting. There was, however, strong evidence that this tension would continue to decrease if the level of illumination were increased to 1000 foot-candles. Stated differently it has been suggested as a conservative rule, that there should be from 3 to 4 watts of light for every square foot of floor space in the room. If the room has a high ceiling, or walls of a dark colour, proportionately more energy should be used in lighting. It will be noticed that on the basis of these researches most working rooms

should have much more artificial light than they get now

Even more important in causing fatigue are the emotional factors. The first is boredom as work goes on, our interest in it declines and we increasingly begin to wish for a change—to go to the pictures, to visit a friend, to play a game of bridge or to read a novel. This sets up an inner conflict which causes leakage of nervous energy. Furthermore, when only half our mind is on the job, our efficiency naturally falls off. Any ways and means calculated to overcome this disinclination to continue with the work and to sustain our enthusiasm and zest for it, would go a long way in preventing fatigue. An all absorbing passionate love for one's work would keep the fires of interest burning brightly and would thus enable one to work for longer hours without feeling bored.

By far the most important cause of mental fatigue are the negative emotions like fear, worry, fits of temper, jealousy, hatred, resentment, anxiety for results, a feeling of being persecuted or of not being appreciated, a sense of frustration, unpleasant relations with one's fellow workers, peevishness, etc., which cause a serious drain of ner

nervous energy These, and not heavy mental work, are the true causes of nervous exhaustion "No matter", says Marden, "in what environment we are compelled to be, we should try to get into harmony with it sufficiently to enable us to work without the friction which exhausts and tears down Friction in the human machine is like sand in a piece of delicate machinery, which grinds and wears out the bearings much more quickly than the regular work which the machine is intended to perform" To acquire proficiency in any kind of work, one has to eliminate all these destructive emotions and attitudes as much as possible In regard to worry, the important thing to remember is that worry never does any good to anybody, but for a fuller treatment of the subject I cannot do better than refer the reader to Dale Carnegie's fascinating book 'How to stop worrying and start Living'

The habit of stopping work at the first sign of fatigue limits a man's working capacity On the other hand, the ability to resist fatigue and work for long periods at a stretch is a valuable asset to any worker It means ease and poise in doing the work and a feeling of confidence that one is the master, and not the slave, of one's job

It gives one added power to meet unforeseen emergencies. What is more, it is the "Open Sesame" to those hidden stores of energy which are commonly associated with the phenomenon of "second wind"

People who have experience of doing exhausting physical work for long periods would probably remember occasions when, as the work progressed, they felt more and more fatigued and finally reached a stage of utter exhaustion when it seemed as if they could not bear the strain any longer. They were on the point of giving up when all of a sudden they felt an accession of fresh energy with a diminution of fatigue. This strange experience, which occurs frequently in athletic activities, is known as second wind. Those who are familiar with it, describe it as a period of increased power, when work is done with an ease and effectiveness and with freshness and vigour which are in marked contrast with the sense of fatigue and staleness that preceded them. It would seem as if they had tapped a new layer of energy containing hidden reserves of unexpected power. It is also a common experience that with perseverance in pushing oneself farther and farther, a third and

a fourth wind may be uncovered, each one leading to greater heights of achievement.

Evidence may be found in everyday life to show that we possess much more power than we use. For example, most of us are familiar with the energising effect of emotional excitement, e. g., anger or fear. It is also a common experience that stimulants, like alcohol, bring into play surprising reserves of physical and mental energy. Again, it is well known that under the stimulus of a dominating idea, like that of patriotism or love, people have accomplished feats of strength which were otherwise impossible for them.

The phenomenon of second wind is not confined to the physical plane but occurs in mental activity as well. If it is actually experienced so rarely, it is because most people are mentally lazy and have the habit of stopping their work at the first sign of fatigue. If, however, they disregard fatigue and boredom and persist in the effort, they should find themselves tapping vast reserves of mental power.

CHAPTER 7

WORK AND REST

An excellent device for preventing fatigue is to intersperse work with brief spells of rest. Within reasonable limits, the time spent in resting is not time wasted ; on the contrary, it is very beneficial, for it not only keeps off fatigue but actually enables a man to produce more work with less effort in a given time.

It has been definitely established by experiments that frequent but short periods of rest increase output. In this matter one may take a cue from the human heart, which does an amazing amount of work and seems to be working incessantly, but really takes a short rest after each exertion, so much so that in the aggregate the rest periods total 15 hours, while the actual work periods total only about 9 hours a day. For brain workers a ten-minute rest after each sustained effort of two hours has been found to be a very useful formula. One may stop work and walk around, or better still, relax in one's chair and gaze idly out of the window for a few

minutes. Some people have tried a short nap after the midday meal or an hour's sleep round about six in the evening, i.e., before the evening meal with great benefit.

Complete relaxation and reclining or lying down occasionally are good methods of taking rest. Lying down for half an hour or so is particularly recommended at the end of the day's hard work before the evening meal.

The rest periods should not be too long, that would be a waste of time. Nor should they be too short, otherwise they would not allow the greatest efficiency.

A man should vary his time-table until he has found the optimum ratio of work to rest throughout the day. On the whole, the best plan to secure the maximum brain output is to have at least five or six rest periods in a day.

CHAPTER 8

PUNCTUALITY AND PROMPTNESS

Time is a very important factor in work, and a mention has already been made of two of the ways in which time influences efficiency, viz., that speed is quite compatible with quality and secondly, that short intervals of rest promote an increased output. There are other ways in which the quality of workmanship depends upon time. For example, punctuality is an elementary and well-known virtue, essential for the smooth running of any organisation. Promptitude includes both punctuality and speedy working, and though it is an obvious necessity, few people seem to realise its true significance in the art of working. There is a very old saying which means that 'He gives twice who gives quickly'. Next to excellence comes promptness as a condition of good work, and a reputation for promptitude soon brings a man a reputation for efficiency. Orders should be carried out with expedition, and anyone who has a flair for getting things done at once is sure to go up very high, whatever his profession. A habit of

promptness unifies and strengthens the faculties. The brain never attains its maximum efficiency or full development except when working at speed ; like a motor car engine, the mental engine is designed to do the bulk of its work in top gear, and to work it in a low gear means excessive wear and tear and is wasteful of both time and energy.

Even a painstaking and thorough worker should not lose the sense of time lest his good work should be robbed of all its merit and he should acquire the reputation of being dilatory instead of thorough. The great danger of dilatoriness is that instructions whose execution is delayed, are liable to be overlooked altogether and a habitual or even occasional neglect of orders soon dubs a man as undependable, if not as lazy and irresponsible as well. Procrastination is the biggest thief of time, and one of the most valuable of all master habits that we should cultivate in life is the habit of never postponing our little everyday tasks and duties merely because they are somewhat disagreeable or difficult. The daily correspondence must be disposed of within twenty-four hours. Everyone should cultivate the habit of completing the day's ordinary work during

the course of the day, leaving no arrears as far as possible. When work accumulates, it not only gets delayed but is also done badly. For the mere sight of a heap of files, letters and other papers on one's desk, all clamouring for one's attention and demanding greater and still greater effort, generates nervous tension and worry which cannot but adversely affect one's mental and physical efficiency. Therefore, should there be an accumulation of papers on one's table, the earliest opportunity should be taken to reduce its bulk by first disposing of the easiest things, like papers for information, approved drafts for signature, or ordinary letters for orders, which in the aggregate will not take more than a few minutes.

The habit of dealing with the ordinary problems at once leaves the mind free to concentrate on the other more important tasks of the day, which of course must receive their due share of time, thought and study.

CHAPTER 9

MAKE A DAILY SCHEDULE OF WORK

Order in business saves time and labour. It is of great help if a schedule of the important things to be done during the course of the day is prepared each morning, or better still; the previous night, and they are tackled in the morning as soon as the day's work begins, the remaining work being taken in hand after the more urgent business has been dealt with.

Only one thing can be done at a time, so, if half a dozen things are waiting to be completed within a given period of time, the question arises in what order they are to be taken up. For example, if a student has to answer six questions in an examination paper and the time allowed is three hours, should he tackle the questions in the sequence in which they appear in the paper or in some other order to obtain the maximum marks possible? It would obviously be wrong to attempt the questions in the order in which they are printed. The student must rather begin with the questions which are easiest, which he

can answer best and which carry the highest number of marks. The same principle applies in all kinds of work. "The real secret", says a great writer, "of how to use time is to pack it as you would a portmanteau, filling up the small spaces with small things", in other words, when there are a number of jobs to be attended to within a given space of time, the order of precedence should be determined by their relative importance, the most important and urgent thing being disposed of first and the less important ones being attended to during the small intervals of the remaining time. But, as mentioned earlier, if there is an accumulation of business, it may be advisable to break its bulk by disposing of the easiest things first.

To sum up, some of the criteria which may be adopted, singly or in combination, to determine the order of transacting business are the degree of (a) urgency, (b) importance, (c) usefulness or (d) easiness, of the task. But whatever the method chosen for fixing the order of priority, the important thing to remember is that the introduction of a time table in work would enable more work to be done in a given time and save the worker from a sense of hurry and

worry. A person would practically double his time if he draws up a schedule of work, begins each task right away, and completes everything punctually.

CHAPTER 10

DIVIDE BIG JOBS INTO PARTS

Occasionally there are big jobs to be done or difficult problems to be solved, requiring a great deal of time and thought. In such cases it is best not to grapple with the whole lot at once. We should rather divide the problem into its component parts and tackle one part at a time, following the example of a man who, being required to break a bundle of sticks, breaks them one by one, or of a mountaineer who, though anxious to reach the summit of the mountain, climbs only step by step. Similarly a task too long to be accomplished at one stretch may appropriately be divided into stages, on each of which one's whole mind should be concentrated in turn, beginning with the part which needs immediate attention or, if the task is not one of urgency, with the part which is easiest or which one can manage best.

This advice is particularly useful when one is undertaking a new job ; in the earlier stages too difficult objectives should be avoided, as failure is likely to do a great deal of harm by undermining

self-confidence. Thus, young poets have been advised to compose short poems rather than epics. Similarly, in writing a book it would be convenient to take up one chapter after another, beginning with the one best known to the writer.

CHAPTER 11

THE MANAGEMENT OF AN ORGANISATION

An outstanding feature of the modern age is large-scale production with its big workshop, office, stores, or corporation, employing large numbers of workers who are divided into groups, each group being placed under a supervisor or foreman, several of such supervisors being, in turn, grouped together under a manager or superintendent, and so on, until at the apex of the organisational pyramid is the managing director or general manager. These supervisors and superintendents should no doubt be familiar with the details of the work they are required to supervise, but their primary responsibility is not so much to do the work themselves as to see that the men under their charge do their allotted portion of work diligently and well. They must, therefore, apply the principles of efficiency not only to themselves but also to their whole group or organisation. In other words, anyone employed in a supervisory or executive capacity must not function merely

as a workman but rather as an organiser and leader of men. This work is generally of a highly specialised nature, but it is nowadays so common and so important, that a brief discussion of it will not be out of place in a book on the Art of Working.

In the management of an organisation the first thing is (a) to distribute the entire work among the different workers and (b) to make adequate arrangements for supervision.

In distributing the work use should be made of the well-known and popular devices of (i) division of labour with specialisation of functions and (ii) delegation of powers. Work should be so organised that every operative has his well-defined duties and every job is the responsibility of someone or other, so that the entire cycle of operations proceeds in a smooth and orderly manner without workers coming in the way of one another.

While allotting duties to others, the executive must not forget to define his own functions, at least in his own mind, for the latter is a matter of paramount importance for the efficient working of the whole organisation. It is necessary for the administrator to transfer a share of res-

ponsibility and power to his principal assistants and other workers lower down the scale, so that he will have enough time to attend properly to the tasks of general supervision and management. One of Benjamin Franklin's wise sayings was that the master's eye will do more work than both his hands. Yet many people are apt to forget that the higher a man rises, the more does his own effectiveness depend upon the loyal assistance of the people below him. A sensible administrator would not, therefore, attempt to do everything himself. He would know very clearly what he can and should do, and what he must get his assistants to do for him. He must not be so engrossed in seeing the trees that he will lose sight of the wood around him ; he must have enough leisure to be able to devote himself to the higher tasks of planning improvements and economies in his organisation. He must deal with the major problems, lay down policies, formulate new schemes of development, and be concerned with the system of working rather than its details. While at all times prepared to do any piece of work which may be beyond the capacity of his subordinates, he must never allow himself to be swamped with the routine work of his undertak-

ing. He must set the pace, give guidance and advice, but must avoid taking upon himself duties which properly belong to his assistants or deputies. An administrator who takes too much upon himself, or has the habit of interfering in the work of his assistants, circumscribes his own efficiency in many ways, nor can he be very popular with his subordinates who are liable to lose initiative and feel helpless to give of their best.

As regards supervision, controlling an organisation is like riding a horse. Anyone riding a horse would not attempt to regulate the animal's speed or gait by catching hold of his legs or hoofs or tail or neck or ears, though all these limbs and organs need to be looked after. Yet this is precisely what those executives are doing who spend all their time correcting drafts or dealing with other trifling matters which should, in the ordinary course, be finalised by their subordinates. Instead of having their hands on the reins of their organisation, they try to control it through its tail and hoofs. An executive must be able to distinguish the important from the unimportant. He must have his finger on the pulse of his organisation or factory; and must

know what constitutes this pulse, that is to say, the criteria by which the efficiency and soundness of his organisation may be judged. Instead of attempting to do everything himself, he must concentrate on getting more and better work out of his subordinates by creating enthusiasm in them ; and while doing so he must take steps to keep himself informed of what is going on around him ; he must not only remain in touch with the work of his principal assistants but must also keep himself posted with upto date statistics showing the working results of his whole organisation as well as its major sections or departments. He should have a system of getting periodical reports from the heads of the various branches of his organisation. But he must not depend solely on these reports. He must supplement and check them by personal visits from

influence. They afford him an opportunity to keep his workers up to the mark by correcting their little faults and educating them in better methods of work. Such inspections should be truly regarded as educational tours. They are necessary to keep up the circulation of blood in the organisation, to maintain and improve the efficiency and discipline of the workers.

An executive must collect round him a set of loyal and dependable assistants who would implement his policies and carry out his instructions faithfully. To pick out suitable men for the key posts is one of the most important functions of an administrator ; for this purpose he must have personal knowledge of the character and abilities of all the workers out of whom he will be required to make his selections for key posts. He should concern himself not merely with the discovering of promising material in his organisation, but should also endeavour to create it. He should have regular and systematic arrangements for increasing the efficiency of his employees, for example, by suitable training, by graphically displaying the results of the performance of various groups, by arousing competition among individual workmen or among groups of them, by

personal interviews or by group discourses. In fact, an executive, to be successful has to be a learner as well as a teacher. By learning he must constantly increase his own efficiency, at the same time, he must pass on his own knowledge to his subordinates, so that they will be constantly picking up better method of work and will gradually be able to take an increasingly large share of his burden off his shoulders. In this way the administrator will be able to multiply himself in his subordinates and increase his own powers as well as the efficiency of his organisation, manifold.

CHAPTER 12

DECISIONS

The bulk of the world's work may be broadly divided into two categories, namely, the taking of decisions and their execution. Even an independent worker like an artisan, painter or author, who works for himself, has to be continually taking decisions, perhaps unconsciously, which he himself carries out. But in collective work, in all big organisations, there is a very clear-cut division between these two functions. There the taking of decisions represents a very important aspect of the work and the higher positions in the organisation are usually occupied by those entrusted with the taking of decisions, for, it is they who are required to direct the policy, to initiate new schemes, to make rules and regulations and to prepare blue-prints of the future development of the organisation. Some of the big decisions, for example, of a Government, may profoundly influence the progress of civilisation and the course of history.

A large part of the duties of an administrator consists in giving decisions or issuing orders on matters which come up before him from day to day. Therefore, the faculty of making swift, firm and correct decisions is an essential qualification for anyone entrusted with the direction of the affairs of an undertaking, and the bigger the undertaking, the more important the role that decisiveness plays in its successful management. Decisiveness, in fact, is a quality which is indispensable in all the affairs of life

For the stability and smooth working of any organisation, big or small, it is necessary there should be continuity of policy and a reasonable degree of permanency in the decisions taken on problems arising from time to time, and further, the orders should be communicated to the workers in clear terms, without needless hesitation or delay. Specially when matters of importance are concerned, those who have to take action upon a decision must feel assured that as soon as a question has been thoroughly considered in all its aspects together with the views of competent advisers, a firm decision will be taken which can be safely put into execution with full confidence that there would be no going back or vacillation,

that responsibility for the consequences will be accepted by the administrator and that those who carry out his decisions will have his support up to the end. Those who disclaim responsibility for their own decisions, when things go wrong, and look out for scapegoats, make poor administrators.

All this, perhaps seems easy and self-evident, but it is a primary condition of efficient administration. Indecision, unwise or belated decisions, or decisions which change at the first sign of opposition or threatened failure, cause endless confusion in any undertaking and jeopardise its satisfactory working.

In the matter of decisions there are several extreme types of men. One sort, contenting themselves with one side of the case, give their decision in favour of the person who is the first to approach them, and then stick to it without paying any heed to other points of view or other aspects of the problem. Their decisions are generally imperfect and one-sided.

Another, the weak and vacillating type of men, give their ears to whoever can capture them. *They have no mind of their own and keep swaying from one view to another, always at the*

mercy of opposing or conflicting suggestions, and a convenient tool of the man who had the last chance on them.

Needless to say, both these types of men often take unwise decisions which cause a great deal of harm to their organisation

There is yet another class of people, mostly among the thoughtful and studious sort, who see twenty sides to a question where others can perceive only two or three, and who go on pondering over them interminably, unable to make up their minds. Such men do not always sufficiently realise that any decision based on commonsense is better than no decision at all. It should be borne in mind that mere decision is not enough, it must also be quick. Time is an essential element in decisions, as in other things, and a decision which is admirable today may, if delayed, be useless tomorrow due to changed circumstances. Most problems are susceptible of more than one solution. But in any case human affairs are so complex and variable and our vision is generally so imperfect that, however long and laborious the search, we can hardly ever hope to get all the relevant facts or see all the factors involved in a problem, and, therefore,

nothing is to be gained by indefinitely postponing decisions in the hope of finding a perfect one. On the contrary, it also happens frequently in practical life that a decision originally based on an incomplete knowledge of facts turns out right in the end; because some new circumstances have arisen in the meantime or perhaps because the decision itself has influenced the psychological atmosphere in its favour and set in motion forces which have helped to carry it through to a successful conclusion. All this underlines the need for promptitude in giving decisions, and an administrator will do well to master this art while guarding against hasty or immature judgments.

Half-decided things clog the mind. Therefore, when a man has anything in hand he should settle it and then dismiss it from his mind. Of course, he should study his problem carefully but having done so, he must make his decision firmly and finally, and then switch on to something else.

It would be incorrect to suppose that the taking of a decision or the giving of an order is nothing more than the exercise of over-riding authority. All the strength and swiftness of a decision will not make it satisfactory if it is

intrinsically unsound. It is, therefore, essential that within the limits of human intelligence the decision is wise and correct. By carefully thinking over individual problems, the administrator must learn the art of taking right decisions; by widening his knowledge and experience he must make his judgment mature. There are, however, a few general principles which would be an aid to the making of correct decisions.

In the first place, true and complete facts must be obtained in order to see what the problem really is on which a decision is required. Wrong facts would inevitably lead to wrong decisions; therefore, the first step in dealing with a problem is to get the facts straight.

The next step is to analyse the facts critically and to think over the problem in order to discover its core. Obviously, the trouble should be correctly diagnosed before a remedy can be applied. Unless the heart of the problem or the root of the trouble has been correctly located, a good deal of time will be wasted in fumbling for a solution and eventually it may be found that due to an incorrect diagnosis an altogether wrong solution was accepted as the correct one.

Having determined precisely what the crux of

the problem is, the next step is to think out the possible solutions. Ordinarily when a problem is placed before an administrator for a decision, he is given the full facts of the case together with the views and recommendations of his advisers ; but if in any case this has not been done, the administrator should take care to rectify the omission. Specially in dealing with major questions or policy, which are dependent upon a multiplicity of factors, commercial, financial, technical and sometimes also political, he should make it a point to obtain information and advice relating to the various aspects of the problem from the departments concerned, so that he may get a complete picture of the matter. Each technical adviser gives technically correct advice from his particular point of view, for example, upon the purely engineering or scientific or financial aspects of the matter, and sometimes the views expressed by the different advisers are conflicting or inconsistent with one another. The administrator is required to sift the material placed before him, to separate the relevant from the irrelevant and to discover the crux of the problem, that is, its one or two vital features on which the decision must, in the ultimate analysis,

depend After weighing up the various opinions, he may give his own independent decision , or may accept the suggestion of one or other of his advisers , or he may, with the help of his knowledge, experience and imagination, evolve what is commonly known as an integrated solution, incorporating as many as possible of the good points in the conflicting suggestions made by his advisers

Fourthly, it should be remembered that if a decision is to be executed efficiently, it must impress the workers as being essentially reasonable and evoke their whole-hearted support and co-operation Therefore, before taking a decision or issuing an order, it is well to consider whether it is likely to lead to any difficulties or opposition from the side of those who will be required to carry it into effect In other words, a decision must give due regard not only to all the material facts available but also to the views and possible reactions of those who will have to act upon the decision and those who may be affected by it The best way of doing this is either to consult, individually, the representatives of the various interests concerned or to discuss the matter at a conference with them and to listen to their views, criticisms and suggestions, before taking a final

decision Such discussions may not only throw new light on problems but also give the administrator an opportunity, if he is tactful, to make his decision acceptable to the others Prior consultation usually disarms opposition and goes a long way in enlisting the support of all the parties concerned It is particularly valuable when introducing important changes which affect either a long standing system of working or the welfare or sentiments of large number of employees or the public

The fifth and final step in making a decision on a problem is to see how and why the problem arose, whether it is likely to crop up again in future, and, if so, whether any special steps could be taken to prevent its recurrence Each problem, when it arises, means so much additional work in solving it, perhaps some expenditure of money and disorganisation of work as well Therefore, the solution of a problem is not complete unless it goes down to the root of the matter and includes steps calculated to eradicate the causes which gave rise to it The solution of a problem must be such that it will not only solve the particular problem under scrutiny but will also eliminate, as far as possible, similar problems in future

CHAPTER 13

COLLECTION AND SIFTING OF EVIDENCE

The object of decisions is to chalk out the course of future action. There is another important variety of mental work, very common nowadays, in which the aim is to reconstruct some past incident as accurately as possible out of such information as can be gathered from available sources. Under this head come law suits, civil and criminal, accidents, petty assaults, frauds and other irregularities of various kinds, in all of which the testimony of various persons and documents is required to be collected and studied in order to find out the true facts and, if necessary, to fix responsibility for what had actually happened.

One serious difficulty encountered in work of this nature is that the material available to retrace the past event is generally incomplete, conflicting or unreliable. Quite often there are two or more contending parties, and the evidence tendered by or on their behalf is contradictory and confusing, not only because some of the witnesses may be

actually partial to one or other of the parties, but also because they are liable to commit genuine mistakes due to having been unobservant, inattentive or confused at the time of the incident, or due to mixing up what they had seen at the time of the incident with what they subsequently heard from others. But whatever the cause of error may be, the information available in such cases is of varying degrees of reliability and has to be carefully scrutinised before it can be accepted.

This kind of work easily resolves itself into two parts, namely, the collection of evidence from persons, records or other material having a bearing upon the incident in question, and then the examination of the evidence in order to ascertain the truth. These two functions may be performed by different agencies, as is usually done in judicial work, or they may be entrusted to the same person or set of persons, as commonly happens in departmental work.

The art of doing this type of work efficiently is to be learnt by close application to individual cases, but a few suggestions found useful in practical work may well be mentioned here.

In regard to investigation or the collection of evidence, if reliable eye-witnesses can be

found, their evidence is obviously valuable and saves a good deal of time. But when truthful eye-witnesses are not available, as is often the case, the next best thing is to look out for the evidence of other disinterested persons who might have heard an account of the incident from either of the contending parties, or from any of the eye-witnesses, immediately after the occurrence, *i.e.*, before the latter could have had an opportunity to concoct their statement. The evidence of such impartial witnesses as to what they were told immediately after the incident, may clarify many a doubtful issue in the case where reliable first-hand evidence is not available. Therefore, trustworthy witnesses, if any can be found, should be interrogated not only about what they personally saw but also about what they heard soon after the occurrence from those who actually witnessed it.

Reading the evidence as it stands may be enough to uncover the truth in the simpler cases. But in complicated cases, the true facts would not be so easily discernible and a great deal of study and thought would be needed before the evidence can be made to give up its secrets. The truth usually lies hidden among the jumble of

evidence more or less in the same way as the few wanted figures lie hidden among the medley of figures in a picture puzzle, or as new ideas lie hidden among well-known ideas. Now the way of solving a picture puzzle is not to gaze at the whole picture at once but to take small portions of it in turn and look at each attentively from different angles, until the sought for figures can be spotted. Again, psychologists say that many of the new ideas and inventions are really nothing but new permutations and combinations of previously known ideas and that the discovery of new ideas is facilitated by rearranging old ideas in new dispositions or looking at them from new angles, so that new relationship amongst them can be more readily detected. For example, the old ideas of a pen here and an inkpot there, when rearranged into the new idea of the ink being with the pen or in the pen, gave birth to the idea of the fountain-pen and ultimately to its invention.

Taking a cue from these analogies, it has been found that the discovery of facts hidden among a mass of confusing and conflicting information is facilitated if the evidence is first sorted out and rearranged according to some chosen method or

formula and the resulting small portions of evidence are then studied separately. For example, two methods of rearranging the evidence found useful from practical experience are to place it in a chronological order, or to regroup it subject-wise, as explained below. Both these arrangements, or any other suitable arrangement instead, would, while blacking out most of the evidence for the time being, focus the attention, in turn, on certain selected parts of the evidence, whereby it will become much easier to discover the hidden relations or the missing links among them and so the true facts of the case.

If several persons were involved in a complicated case, the correspondence or dealings between the different pairs of them could first be sorted out separately and then each set could be rearranged in a chronological order. This device, which places the circumstances leading to the principal incident in their natural sequence, helps to separate the causes from the effects and thus to reveal the true relationship between one incident and another. For example, in a disputed case of breach of contract, such a rearrangement of the correspondence exchanged between the contending parties may greatly facilitate the detection of

the point where the first failure, or departure from the terms of the contract, occurred.

The subject-wise arrangement recommended for adoption in intricate cases, requires that the various material points or minor incidents or matters under dispute, which have a bearing on the main issues, are first determined and then all the testimony relating to each such incident or point is picked out and collected together in one place. Rearranged in this manner small portions of the evidence may be seen, one at a time, in a new light which shows up at a glance the corroborations and the contradictions in the statements of the different witnesses and thereby discloses the truth in regard to the various minor incidents, which, when pieced together, point the way to the much-wanted unknown facts.

CHAPTER 14

ACQUIRE SUPERIORITY IN A SELECTED PHASE OF YOUR WORK

Another maxim of efficiency is that each worker should acquire superiority in at least one phase of his work. Superiority in a limited aspect of work will soon be found to spread to the entire field of his endeavour and even to the phases of his life unconnected with his vocation. Life is so complex and many-sided that it is hardly possible for anyone to acquire mastery, or even a high degree of proficiency, in all the aspects of his work. Some of our leaders of thought and action have, no doubt, shown remarkable versatility, but the common run of mankind cannot expect to attain all-round excellence in their work. Yet it is quite practicable for most of us to develop our special aptitude and acquire superiority in a selected branch of our work. This will give a man self-respect and self-confidence which will soon illumine other phases of his work as well and thus promote all-round superiority and success.

A man who possesses most of the elementary virtues to an average degree would no doubt be a good man, but would show little or no personality. Let him, however, acquire a distinct superiority in one field and his personality will immediately become bright. Personality, as representing the sum-total of a man's effect upon others, is greatly influenced by this development above the average along some line. A man becomes impressive because some phase of his life is done unusually well. A man who is quite normal in all respects will hardly have an attractive personality. "An effective personality," says a noted psychologist, "requires not only a variety of skills but relative superiority in a few fields and distinct superiority in one. The chief superiority should be in a vocational field, the others in the fields of sports, hobbies and the social arts..... Even in high schools and grade schools, superiority or greater effort in a few directions could be made a condition. One child might develop a superior handwriting, another a superiority in geography, another an unusual competence in writing letters or handling correspondence. So far as possible, the subjects of special stress should correspond with existing

aptitudes..... The mere habit of developing superiority is a preparation for success in later life."

The greatest benefactors of mankind, the leaders of thought and action, have been those who showed uncommon brilliance in some branch of human endeavour. Likewise the average person could improve his success and happiness if he would select a phase of his work and acquire mastery over it so that he is able to do it better than any of his fellow workers in the undertaking. For example, his strong point, according to his natural aptitude, may be drafting, or handling men, or conducting meetings or negotiations, or getting work out of others, or holding enquiries, or a knowledge of rules and regulations; but whatever it may be, he should develop it until he can truly regard himself as a specialist in his particular line. This will give colour to his personality and make him feel that his life is worth while. Distinct superiority in a selected field will act as the nucleus and a starting-point of superiority in many other fields and skills. The best way to all-round or many-sided excellence is to acquire excellence in a limited field.